

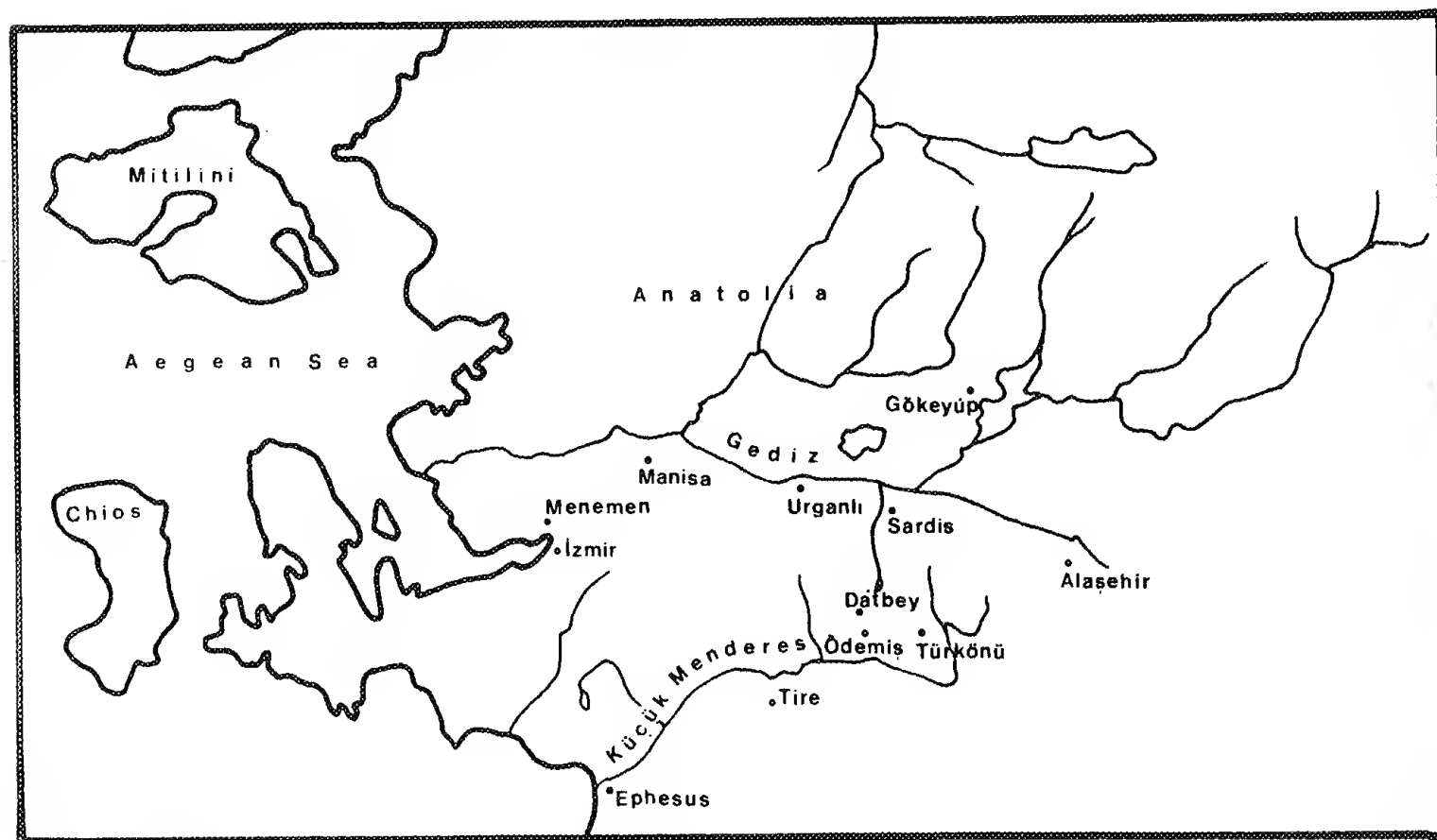
HOWARD CRANE

TRADITIONAL POTTERY MAKING IN THE SARDIS REGION OF WESTERN TURKEY

Although in recent decades the traditional potter's craft has suffered in Turkey, as inexpensive glass, metal, and plastic vessels of industrial manufacture have replaced many of the potter's wares and increased social mobility has drawn potters away from their traditional occupations, it continues to supply a variety of earthenware vessels and utilitarian objects of everyday use to a large market.

The region of Sardis in western Anatolia is one of the places where it is still active. Traditional potters are encountered in villages and towns of both the Gediz and Küçük Menderes plains and the mountains bordering them (fig. 1).

Examination of the craft as currently practiced in the Sardis region was carried out as part of the program of field research of the Harvard-Cornell Archaeological Exploration of Sardis to enhance its understanding of the excavated common wares from Sardis itself.¹ Results of field work in the local pottery villages served to document craft traditions which appeared at once both highly conservative and often remarkably vital and prosperous. In terms of technique and organization, two traditions of pottery making were encountered, although both were never found in the same village. One of them employs the kick wheel and vertical (two-chambered, updraft) kiln, the other the



1. Map of Sardis region in western Turkey showing locations of towns and villages in which traditional pottery manufacture was studied.



2. Potters' workshed (right) and kiln (left) with clay dump in foreground, Türkönü.

turntable (*tournette*) and open-air firing. Practices in both traditions remain substantially unaffected by modern industrial technologic.²

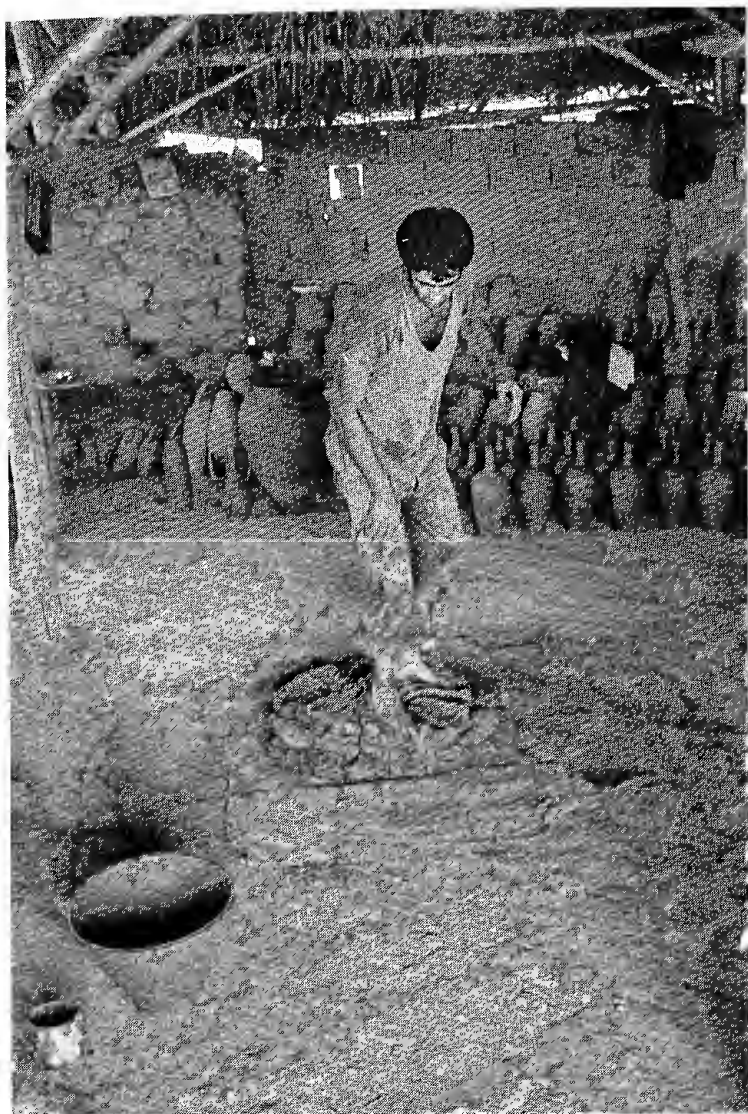
The wares produced by the kickwheel and turntable potters differ markedly from each other in physical character and are easily distinguishable. That both traditions were present in the Sardis region throughout the Turkish period as well as earlier is clear from the unglazed common-ware finds from various sectors at Sardis itself. Therefore, although available data are for the most part limited to the present-day practice of local potters, this practice may reasonably be supposed to approximate the models for earlier pottery making.

KICK-WHEEL TRADITION

Of the two traditions of pottery making, that based on the kick wheel and vertical kiln is by far the more com-

mon. It is centered in the villages and towns of the river plains of the Sardis region with their abundant supplies of alluvially deposited potter's clay. Craftsmen are usually organized into small workshops of two to four people who are more often than not members of the same family. Generally the craft is passed down from father to son. Women are not normally taught the craft and, where they are involved at all in production, they are engaged only in its most peripheral and menial tasks. A notable exception is the village of Datbey near Ödemiş: there women are responsible for the execution of the painted decoration on finished vessels.

Pottery is made only in the warm, dry months between March and November, when conditions are suitable; throwing, drying, and firing vessels are impossible during the cold, wet winter months. The potters work in long, low sheds (*imalâthane*) close by, but usually detached from, their houses (fig. 2), with

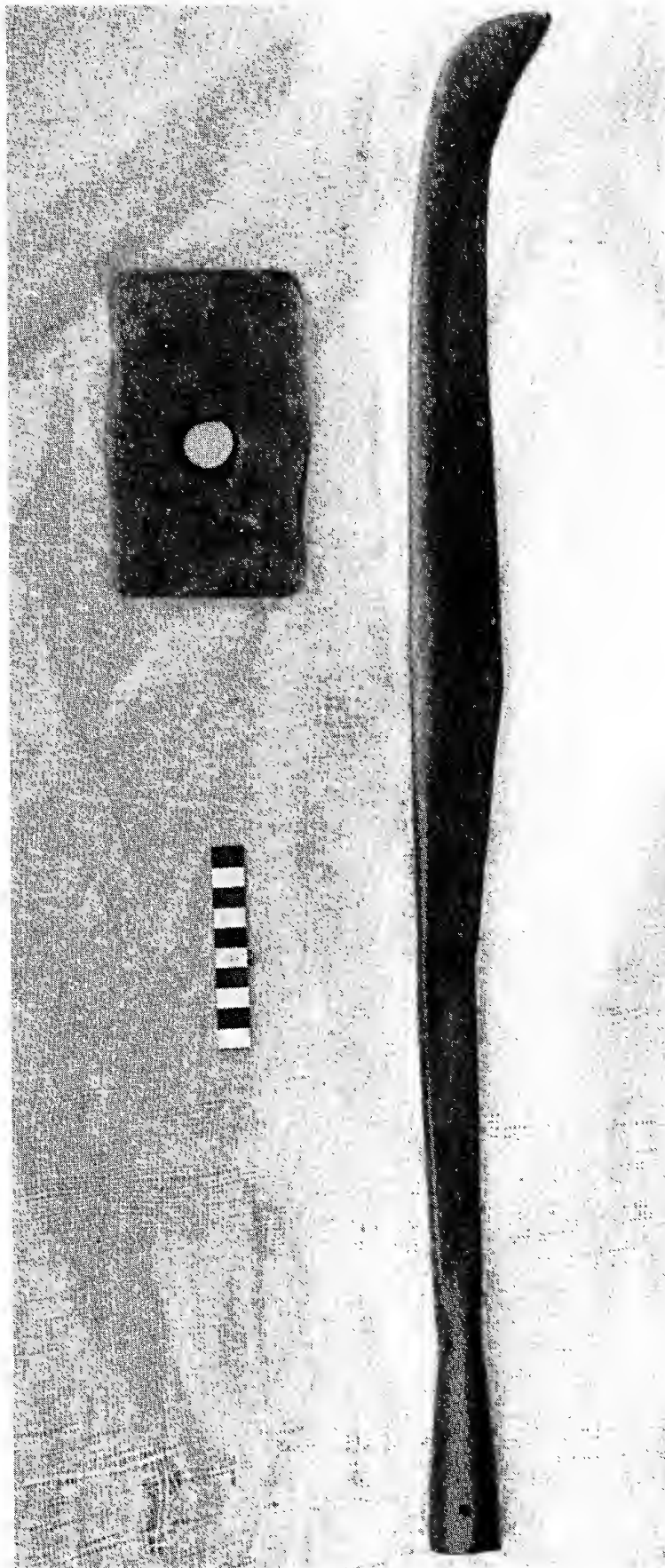


3. Treading clay on workshed floor, Türkönü.

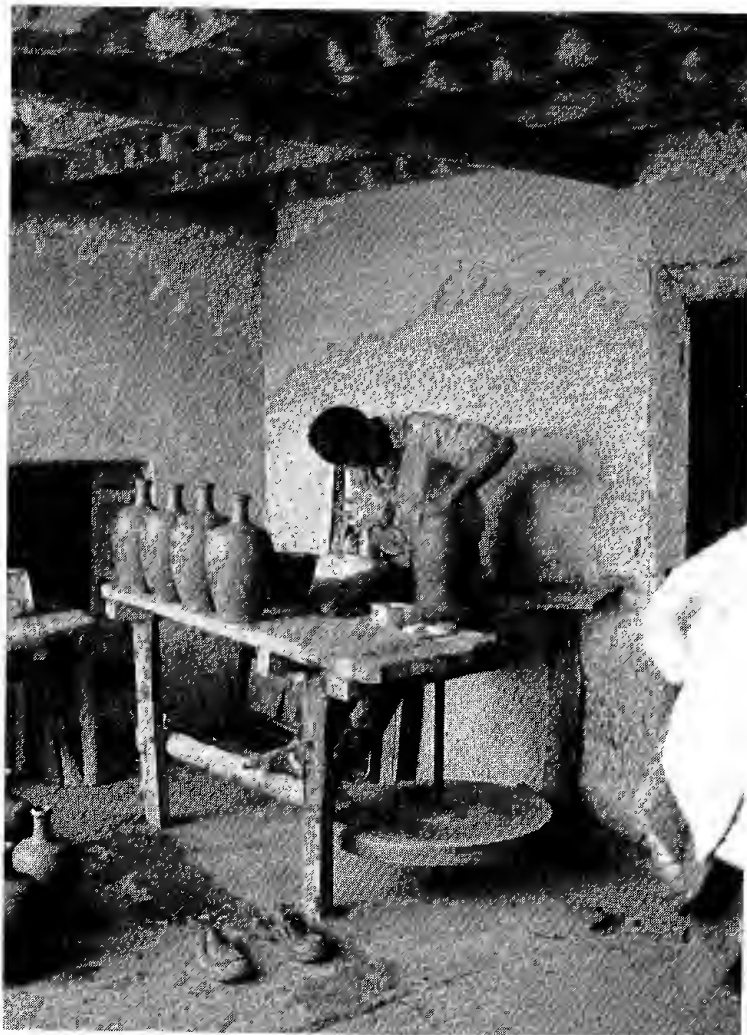
workbenches and wheels at one end and adequate interior space for treading clay and drying finished pots at the other.

Clay is usually dug out of surface beds, although occasionally it is dug from subterranean shafts as well. Because the removal of clay from surface beds in what is generally silt-rich crop land effectively destroys its agricultural potential, potters are forced to buy the fields containing the clay they wish to exploit. As good crop land in the Gediz and Küçük Menderes valleys is extremely expensive, the securing of sources of raw material represents a major concern and investment on the part of local potters.

For potting, two types of clay are generally mixed: one is described as *yağlı* ("oily" or plastic), the other as *yağsız* ("non-oily" or lean and rich in gritty temper). The two types of clay are combined in approximately



4. Potters' tools: (above) clay sickle (*çamur orağı*); (below) rib (*petroz*).



5. Potter at wheel, Datbey.

equal amounts. The dry clay is first soaked in a large pit (*çamur çukuru*), then, as required, is dug out and worked on the workshed floor by treading. This wedging is usually the job of the potter's assistant (*çamurcu*) who treads the clay into a wheel-shaped mass by moving rhythmically in a circle and pressing down heavily with his heels (fig. 3). Hard lumps of clay are sometimes broken up by a blunt-edged sword-shaped tool called a *çamur orağı* ("clay sickle") or *çamur turpanı* ("clay scythe"; fig. 4). Although clay is levigated by the potters of Menemen, the practice is not common in the Sardis region.

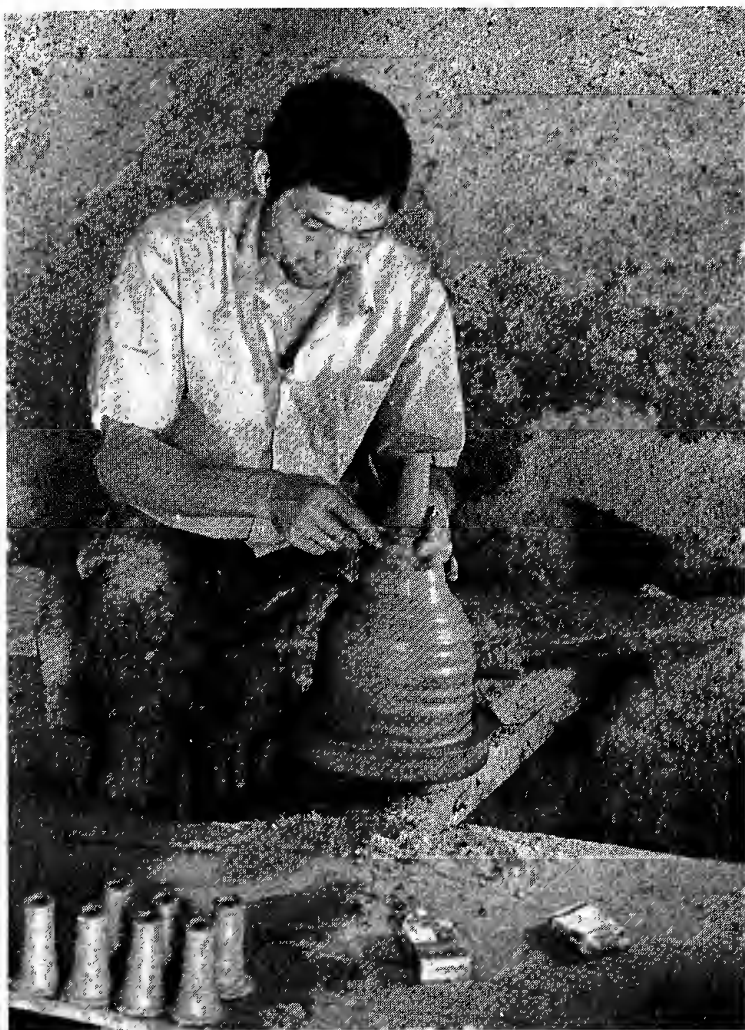
After repeated wedging for four or five days on the workshed floor, the clay finally becomes sufficiently stiff and homogeneous for throwing. Then the potter's assistant cuts balls of clay from the mound on the floor and works it by hand into cones (*künthe*, *topaç*), which vary in size according to the dimensions of the vessel to be thrown. For throwing, the potters (*testici usta*, *çöm-*

lekçi) employ kick wheels (*çark*) set into workbenches (*tezgâh*; fig. 5), which consist of a heavy wooden flywheel (*tekerlek*) revolving on a fixed pivot with a vertical axle (*mil*) socketed to the underside of the wheel head (*çark*) on which the pot is thrown. Because of its weight and durability, both the flywheel and workbench are usually made of walnut. The potter sits atop a wooden seat behind his workbench and kicks the wheel counterclockwise with either his left or right foot.

Before centering the clay on the wheel, the potter sprinkles its surface with wood ash to prevent the clay from sticking when the finished pot is cut loose and removed. The actual shaping of the clay is done by hand with the help of a rib (*petroz*, *puçula*), a rectangular piece of pine measuring ca. 10 × 16 m. with a round hole at the center for the fingers. The clay is first centered on the wheel and pulled up into a tall, slender shaft with both hands. It is then forced down and opened up from the center, after which the walls of the vessel are pulled up. Narrow necks are sometimes made separately and luted in place with a thick slip. Finally the vessel is slowly turned, and imperfections—holes and cracks—are filled with slip, after which the surface is smoothed one last time with the rib, and the finished pot is cut loose from the wheel with a string.

A considerable variety of types of wares are made by the traditional kick-wheel potters of the Sardis region. These include one- and two-handled storage jugs for water (*testi*); drinking jugs with a single handle and spout (*bardak*); flower pots (*saksı*), often characterized by elaborate decorative surface treatment; large, handleless jars (*küpeç*, *tombaç*) for the storage of molasses, tomato sauce, cheese, and other foods; large, openmouthed bowls (*dağar*) for the mixing and storage of foods; large pithos-like storage jars for keeping grain, oil, pickles, and other foods; two handled churns (*çalkar*) for making *ayran* (watered yogurt); small, straight-walled yogurt bowls (*yoğurt kasesi*) and yogurt jugs (*yoğurt bardağı*) of various sorts. Many of these are made in a variety of graded sizes which are numbered according to a traditional system from first (*birli*) to tenth (*onlu*) in order of decreasing size.

In addition the traditional potters make small, footed charcoal braziers (*maltız ocağı*), bee smudge pots (*arı tüt-süsü*), drums (*dümbek*), whistles (*düdük*), funeral pitchers for the washing of the dead (*cenaze çömleği*), chamber pots (*havruz*), and bowls for water pipes (*nargile lülesi*). Until recently they also produced earthenware water pipes (*künk*), but these have by now been replaced by flexible plastic pipes. Similarly roof tiles (*kiremit*) have



6. Forming spouts on potter's wheel, Datbey.

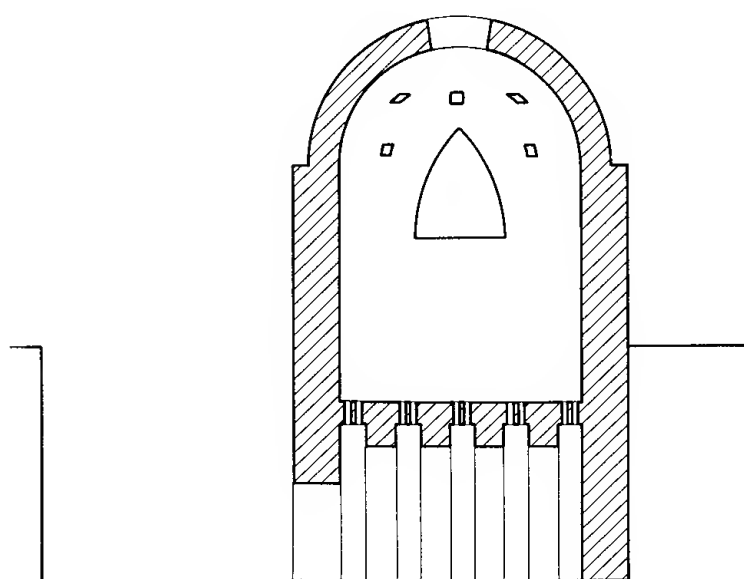
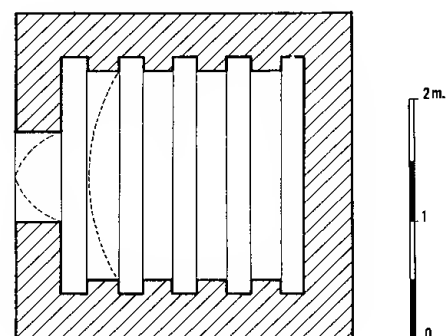
been abandoned for industrially produced interlocking tiles, and the large cylindrical bee hives called *arı kovani* are no longer made.³

Potting is usually done in the morning hours. A skilled potter working steadily is able to turn out about fifty large (*ikili*) *testi* or a hundred large (*beşli*) *bardak* in a morning, if he has an assistant to prepare the clay for throwing. Spouts and handles are made separately and attached in the afternoon when vessels have become leather hard (fig. 6). Finished pots are left to dry in the cool, damp interior of the workshed. In order to ensure even drying, they are first set on their feet, then, after six or seven hours, inverted and left to dry further while standing on their rims. Dry but unfired vessels are called *çig* (raw). Before actual firing in the kiln, the raw pots will be set out in the sun for several hours to drive off residual dampness.

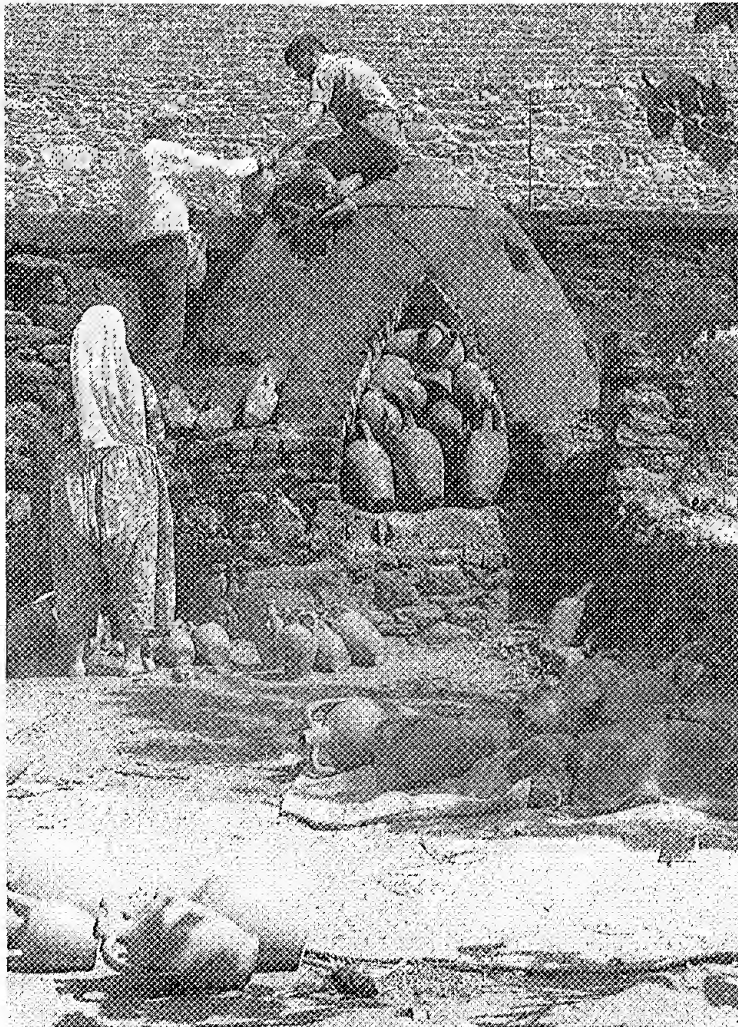
Glazed earthenwares are produced in the Sardis region only at Menemen, where pulverized borax from

Bandırma on the Sea of Marmara is used as a glazing material. Raw pots are dipped into vats in which powdered borax has been agitated in water, after which they are allowed to dry. Firing and glazing are done in a single operation; stones and fragments of broken pottery are used to separate pots during firing.

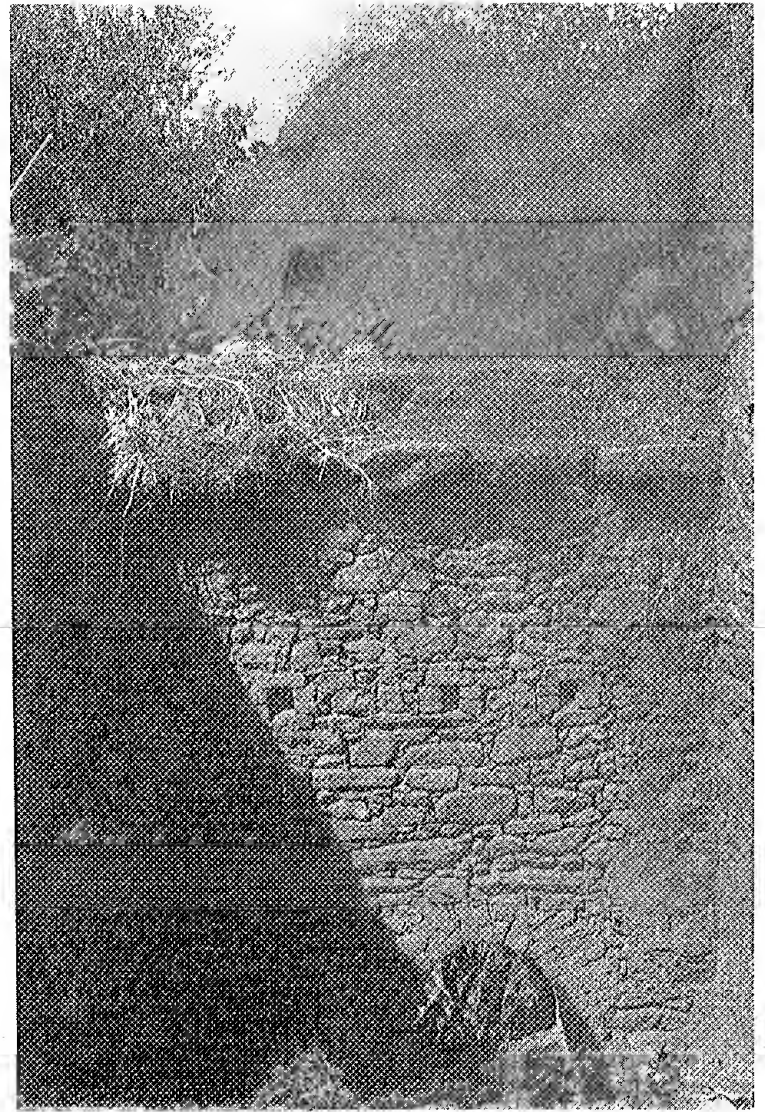
The kiln or *fırın* (figs. 7, 8, 9) generally stands detached in the yard before the workshed. In western Anatolia, kilns are of the vertical type, with the fire box below and the firing chamber above. They are built of field stone and brick with a thick coat of mud plaster on the interior. The fire box is usually set below ground level and is fed through a stoke hole opening on a fire pit excavated to one side of the kiln. The ceiling of the fire box is supported by several round arches and is perforated by multiple rows of small vent holes through which heat and flame enter the firing chamber. The exterior of the upper chamber is sometimes banked with earth as well. A door cut into one of the sides of



7. Plan and section of kiln, Datbey.



8. Loading kiln in preparation for firing, Datbey.



9. Kiln with warming fire, Datbey.

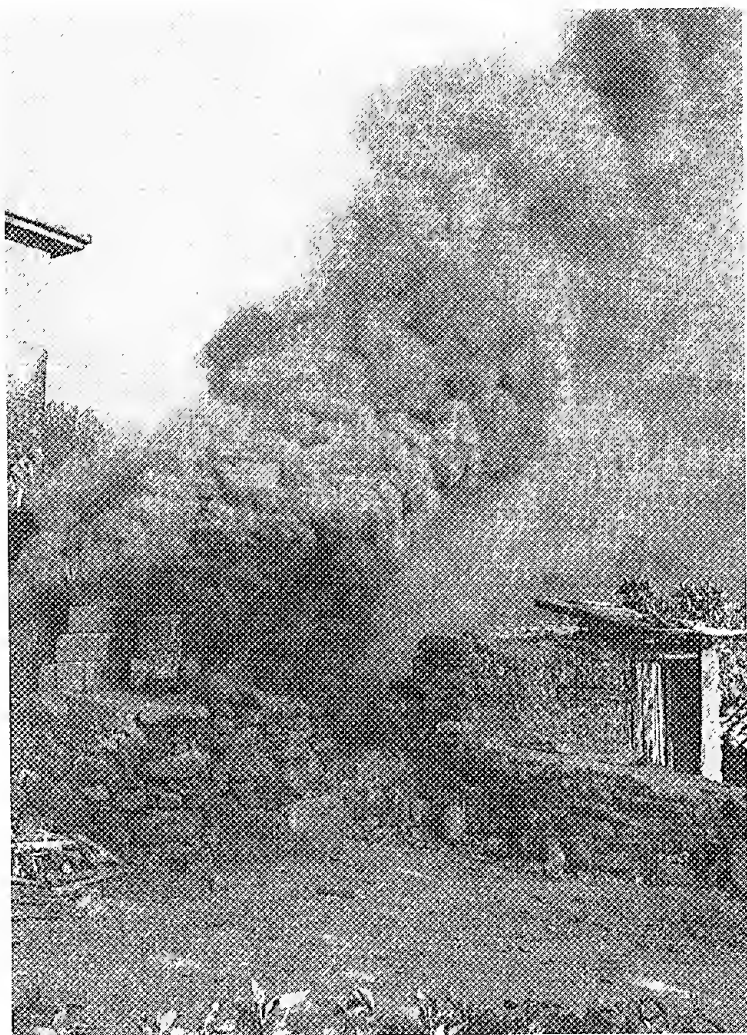
the firing chamber facilitates loading and emptying. Its walls slope inward at the top, and in some cases the firing chamber is covered with a domical vault with multiple smoke holes.⁴

When a sufficient number of pots (usually between 700 and 900) have been produced to fill the kiln, it is loaded. The vessels are tightly packed, but in most cases the potters follow no particular order in loading. After the firing chamber has been entirely filled, the loading door and open top of the kiln are covered with broken pots and roof tiles (in some cases the door is bricked up) to prevent heat loss during firing.

Firing takes between seven and eight hours. Pine logs are used to fuel kilns where available (as in the village of Datbey outside of Ödemiş), but generally scarcity and cost restrict the use of wood as fuel among the potters of the river plains. Instead, swamp grass (*kova*) and the cake of crushed olives from which the oil

has been extracted (*pirina*) are used to fire the kilns of the lowland potters.

In the first stage of firing, a low fire is set in the fire box and maintained for from three to four hours in order to drive off the residual water of plasticity in the pottery. The fire is then gradually stoked to a greater intensity until it attains a maximum temperature of ca. 800° C. at which it is kept for approximately four hours (fig. 10). Finally, when the pots in the firing chamber become incandescent and the soot which has accumulated on them in the early stages of the firing process has burned away, the fire is scraped out of the fire box and the kiln is allowed to cool. The finished pots are removed from the kiln on the morning of the following day and sold almost immediately to the wholesaler (*toptancı*) who commissioned them. They are subsequently marketed in the towns and villages of the Sardis region.



10. Kiln during high firing, Datbey.



11. Mallets and sieve for pulverizing and sifting biotite used as temper in pottery, Gökeyüp.

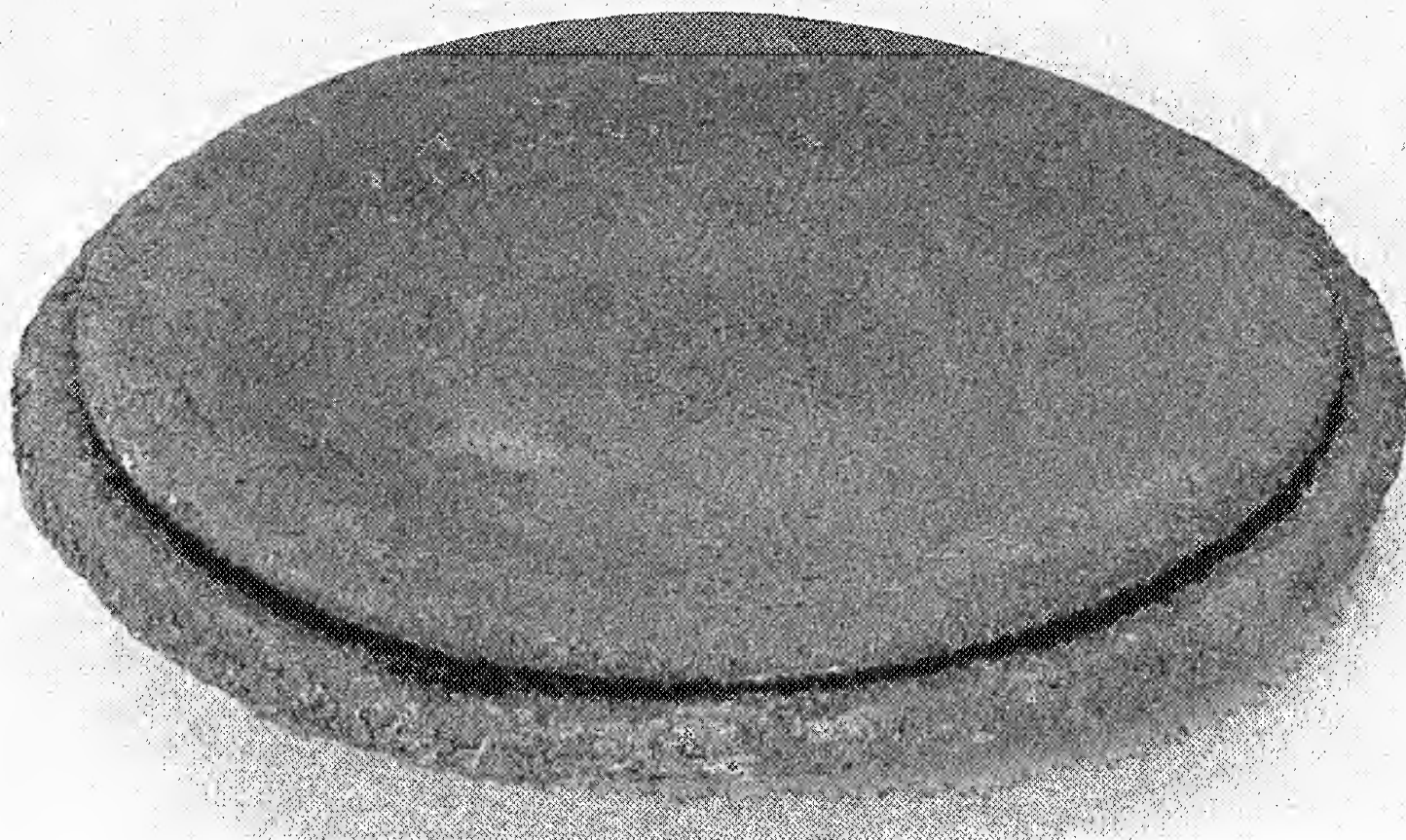
Although less widespread than it was a generation ago, pottery making in the kick-wheel tradition remains an important craft in the plains of the Gediz and Küçük Mendere. While the variety of wares produced by kick-wheel potters has contracted as modern manufactured products have supplanted certain of the traditional pottery types, the craft remains vital and those craftsmen engaged in it earn a fairly prosperous livelihood. The technology used by the kick-wheel potters remains little affected by modern industrial practices. There is every reason to expect the craft to survive in the Sardis region as long as demand for such items of everyday use as water jugs and earthenware containers for the storage of food remains high.

TURNTABLE TRADITION

The second tradition of pottery making encountered in the Sardis region involves the use of the turntable in

place of the kick-wheel and open firing rather than kiln firing. It is encountered only in the village of Gökeyüp, situated on the slopes of Dibek Dağı about thirty-five kilometers north of Salihli on the road to Demirci. Here about sixty potters (*çömlekçi*) are active, engaged for the most part in making earthenware cooking pots which find an extensive market throughout southwest Anatolia.

In contrast to normal practice in the Sardis region, the making of pottery on the turntable is exclusively a women's craft. The skill is transmitted from mother to daughter rather than from father to son, which is unusual in this society. Extraordinary also are the materials they use, their technique of forming vessels, and their method of firing. The clay bodies of the Gökeyüp wares are formed of two constituent materials: a gritty, micaceous secondary clay (*toprak*) dug from the Sari Su Yaylasi, two hours distant from the village; and a pulverized mica schist (*mengene taşı*)



12. Turntable (*dönek*) and bat (*kalıp*), Gökeyüp.

which is found at many places near the village. This latter, which is composed largely of biotite, is used as temper for the Gökeyüp wares and imparts to them their distinctive surface quality.

Both clay and stone are pulverized with wooden mallets (*tokmak*) and passed through a coarse sieve (*kalbur*; fig. 11). They are then stored in dry form and mixed with water each morning by the potter in the quantity needed for the day's work. Clay and pulverized stone are combined in a proportion of about three parts of the former to one of the latter. Clay is wedged by hand and when ready for potting is considerably wetter and more malleable than the clay prepared for throwing on the kick-wheel.

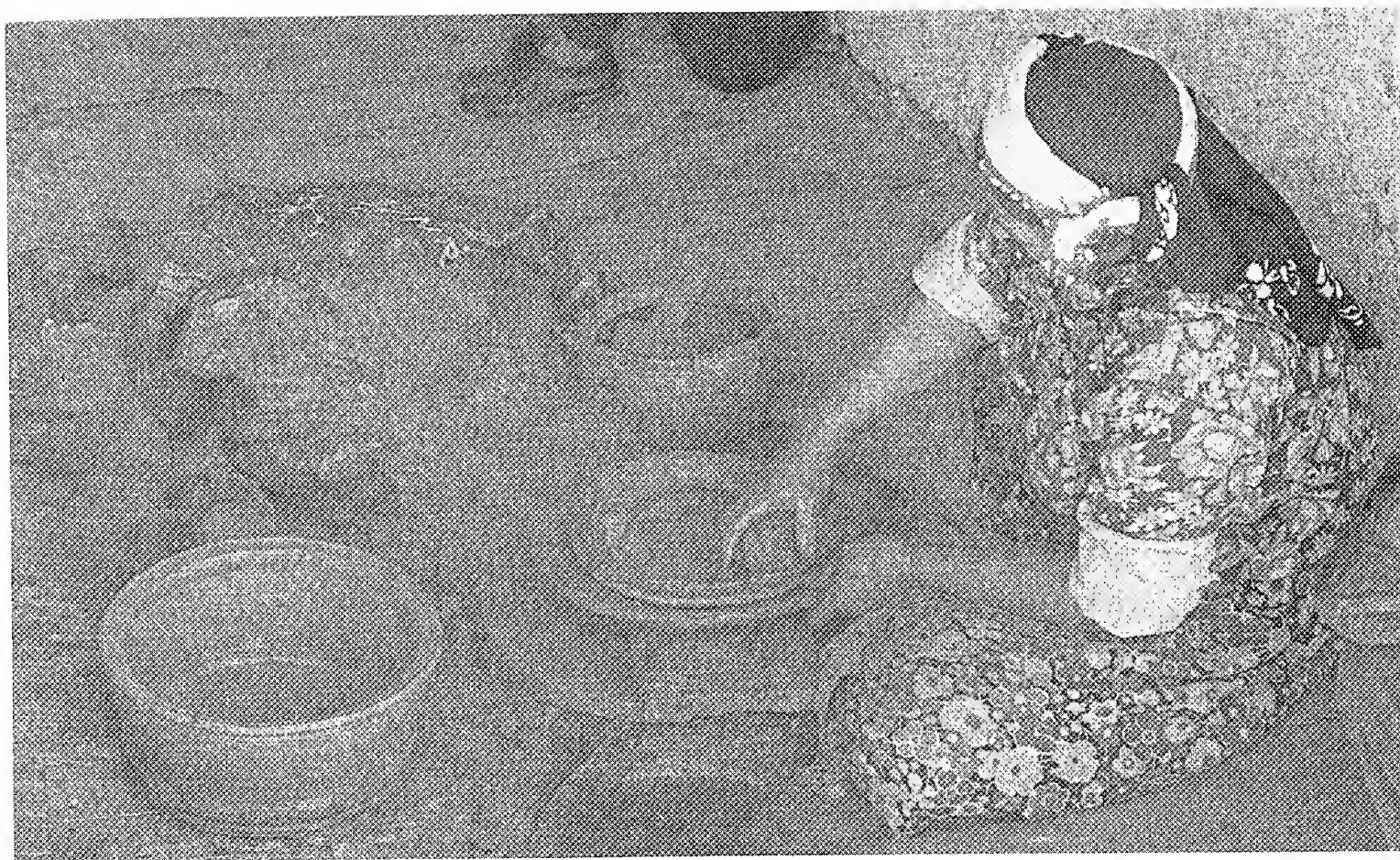
The actual potting takes place on the porches of the village houses rather than in separate workshops. Each potter works alone, sitting cross-legged on the floor and operating a shallow, concave, earthenware turntable (*dönek*) about .35 m. in diameter (fig. 12) which she places on top of a board to minimize friction. The turntable is rotated slowly with the left hand, to left or right as the need arises rather than in a single, counter-clockwise direction as is the case with the kick-wheel.

The clay is placed, not directly on the turntable, but on a second, slightly smaller and less concave bat (*kalıp*) which is set on top of it (fig. 12). Both the turntable and bat are made of the same body material as the Gökeyüp wares themselves.

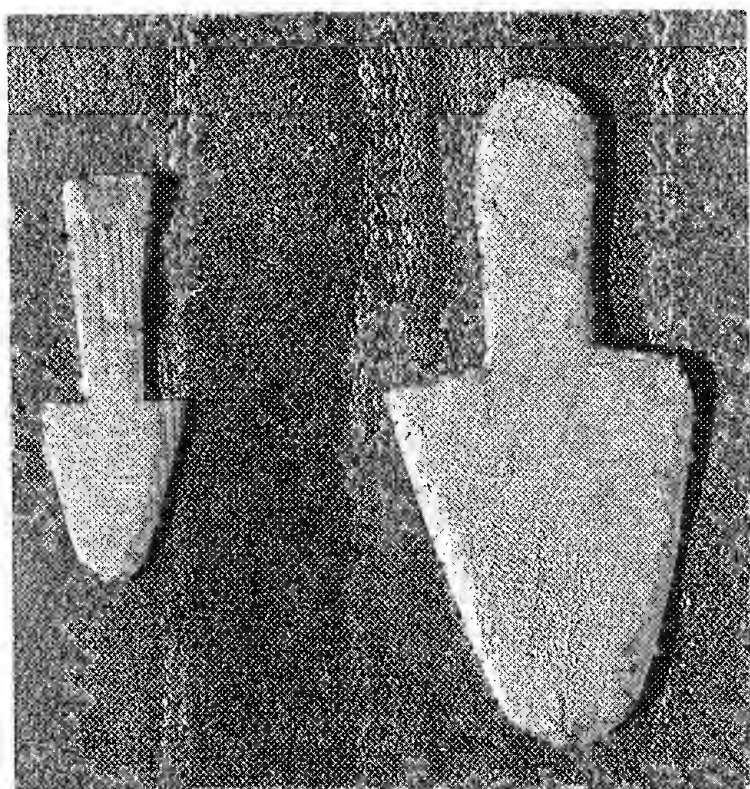
Pottery making begins with the potter patting out several disk bases and an equal number of roughly shaped rectangular slabs for sides. This is done on a surface sprinkled with crushed mica schist to prevent sticking. Next, the potter places a disk base on a bat and slowly rotates the turntable with her left hand while refining the shape of the base with her right. A rectangular slab side is then fixed around the circumference of the base and joined by pinching with the fingers of the right hand as the turntable is again rotated with the left (fig. 13).

After the pot has been roughly shaped, its profile is refined with a pair of arrowhead-shaped paddles called *kılıç* (fig. 14). Made of either pine or poplar, the larger paddle measures about 19.0 cm. in length by 10.0 cm. in width and has a thickness of about 0.5 cm.; the smaller is about 13.0 × 5.0 × 0.5 cm.

Using the larger of these tools, the potter raises the



13. Coil building of the walls of a stew pot (*güveç*), Gökeyüp.



14. Paddles (*kılıç*) used in forming walls of vessels, Gökeyüp.

walls of the vessel by striking the pot's roughly formed exterior. Then, working with both paddles, the potter smooths the interior and exterior of the pot and sharpens the profile of its rim. A wet rag is run over the surface of the slowly rotated pot to impart a smooth finish (fig. 15). The moist clay of the pot is then allowed to dry for about a half hour, after which the potter imparts to the vessel a swelling profile by applying pressure to its interior walls with a wet rag, while at the same time again rotating the turntable. Finally, the finished pot is set out in the sun to dry.

As with the kick-wheel potters, the turntable potters produce a variety of types of vessels, some for sale, others for domestic use. They include stew pots (*güveç*) in a number of sizes, some with lids, others without; frying pans (*tava*) in various sizes; disk-shaped baking trays (*saç*); spouted drinking jugs (*bardak*); deep, wide-mouthed pans (*tepsi*) in several sizes; small storage jars with swelling sides and narrow necks (*küp*); and wash basins with raised soap stands at the center (*el yıkama güveci*). A skilled potter preparing her clay in the morning and working fairly steadily for six or eight hours is



15. Smoothing walls of a stew pot with a wet rag, Gökeyüp.

able to produce perhaps thirty *güveç* or from fifteen to twenty *bardak* a day. Working at this rate, a potter can accumulate enough pots for a firing every two to three weeks.

Firing is done not in a kiln but in the open air on specially built stone floors in the courtyards of the potters' homes or in the open squares of the village streets (fig. 16). The fuel used in firing is scrub oak (*meşe odunu*) gathered on the slopes of Dibek Dağı. Firing is at low temperatures and lasts for about two hours. Before firing, the pots are laid in courses with layers of brushwood between. When lighted, the fire burns rapidly through the brush and the pots fall into the ash and coals left by the blaze. The length of exposure to burning for any one pot hardly exceeds thirty minutes. As the brush burns away, the potter, using a long wooden pole tipped with an iron hook, lifts the still hot pots out of the ash and places them mouth down on the

ground beyond the fire. A second woman then scatters chopped straw over them, which bursts into smouldering flame (fig. 17) and reduces the surface of the pots to produce the characteristic blackish-gold finish of the Gökeyüp wares.

In contrast to the kick-wheel potters, Gökeyüp potters work in all seasons, even the winter months. Nor is the craft declining as is generally the case with pottery making elsewhere in the Sardis region, probably because the *güveç* is held in high regard by Turkish cooks and is yet to find a widely accepted, industrially produced substitute. Although a few of the Gökeyüp potters have turned to carpet weaving in recent years, the craft continues to thrive and contribute to the prosperity of the village.

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16. Open firing of dried vessels, Gökeyüp.

NOTES

1. This article is based on work done in August 1975 and September 1977, when I visited traditional potters and their workshops at a number of locations in the Sardis region, including the towns of Salihli, Alaşehir, Urganlı and Menemen in the Gediz plain, the villages of Datbey and Türkönü near Ödemiş in the plain of the Küçük Mendere, and the village of Gökeyüp in the hill country to the north of the Demirköprü Dam on the Gediz.
2. For descriptions of parallels in the Aegean area, see Judy Birmingham, "Pottery Making in Andros," *Expedition* 10 (1967): 33-39; Stanley Casson, "The Modern Pottery Trade in the Aegean," *Antiquity* 12 (1938): 464-73; Roland Hampe, and Adam Winter, *Bei Töpfern und Töpferinnen in Kreta, Messenien und Zypern* (Mainz: Verlag des Römisch-Germanischen Zentralmuseums Mainz, 1962); idem, *Bei Töpfern und Ziegeln in Süditalien, Sizilien und Griechenland* (Mainz: Verlag des Römisch-Germanischen Zentralmuseums Mainz, 1965); Frederick R. Matson, "The Potters of Chalkis" in *Classics and the Classical Tradition; Essays Presented to Robert E. Dengler on the Occasion of his Eightieth Birthday*, ed. Eugene N. Borza and Robert W. Carruba (University Park: Pennsylvania State University Press, 1973): 117-42; Charles H. Morgan, II, *Corinth, vol. 11. The Byzantine Pottery* (Cambridge, Mass.: Harvard University Press, 1942); Maria Voyatzoglou, "The Jar Makers of Thrapsano in Crete," *Expedition* 16 (1974): 18-24.
3. The types of pottery produced by the potters of the Sardis region bear a striking resemblance to the types reported by Hampe, (above n. 2) and by Birmingham (above, n. 2). Neither this list nor the list of wares produced by the turntable potters should be considered as exhaustive of the types of wares produced by traditional potters in the Sardis region.
4. The vertical kiln of the sort found in the Gediz and Küçük Mendere plains has antecedents in the Near East which reach back to the third millennium B.C.; see Sir Lindsay Scott, "Pottery," *A History of Technology*, I, ed. Charles Singer, E. J. Holmyard, and A. R. Hall (New York: Oxford University Press, 1954), pp. 393-96. Vertical kilns similar to those used today were published by Morgan, (above, n. 2), pp. 16-21, for Byzantine Corinth. Contemporary parallels are reported by Hampe (1962), (above, n. 2), pp. 24, 44, 75, 83, and Hampe (1965), (above, n. 2), pp. 154, 162, 165, 169 for Crete, Rhodes, Cyprus, and Söke in western Anatolia.



17. Reducing surfaces of fired pots by covering them, while still hot, with smoldering straw, Gökeyüp.